# *Lexicon NT Series Amplifiers*

## *User Guide*

*Models 212, 312, 412, 225 and 501*

Lexicon

## Unpacking and Inspection

After unpacking the amplifier, save all packing materials in case you ever need to ship the unit. Thoroughly inspect the amplifier and packing materials for signs of damage. Report any shipment damage to the carrier at once; report equipment malfunction to your dealer.

## Precautions

Save these instructions for later use.

Follow all instructions and warnings marked on the unit.

Always use with the correct line voltage. Refer to the manufacturer's operating instructions for power requirements. Be advised that different operating voltages may require the use of a different line cord and/or attachment plug.

Do not install the unit in an unventilated rack, or directly above heat producing equipment such as power amplifiers. Observe the maximum ambient operating temperature listed in the product specification.

Slots and openings on the case are provided for ventilation; to ensure reliable operation and prevent it from overheating, these openings must not be blocked or covered. Never push objects of any kind through any of the ventilation slots. Never spill a liquid of any kind on the unit.

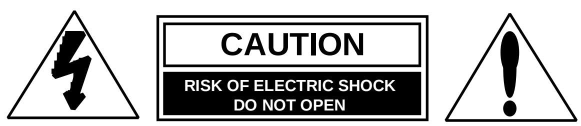
This product is equipped with a 3-wire grounding type plug. This is a safety feature and should not be defeated.

To prevent shock or fire hazard, do not expose the unit to rain or moisture, or operate it where it will be exposed to water.

Do not attempt to operate the unit if it has been dropped, damaged, exposed to liquids, or if it exhibits a distinct change in performance indicating the need for service.

This unit should only be opened by qualified service personnel. Removing covers will expose you to hazardous voltages.

This triangle, which appears on your component, alerts you to the presence of uninsulated, dangerous voltage inside the enclosure... voltage that may be sufficient to constitute a risk of shock.




This triangle, which appears on your component, alerts you to important operating and maintenance instructions in this accompanying literature.

## Acknowledgements

The Lexicon NT Series amplifiers are custom manufactured for Lexicon by Bryston Ltd. of Ontario, Canada.

The CP and DC Series are manufactured under license from Dolby Laboratories Licensing Corporation. Additionally licensed under one or more of the following patents: U.S. numbers 3,632,886, 3,746,792 and 3,959,590; Canadian numbers 1,004,603 and 1,037,877. "Dolby" and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.

The NT Series amplifiers are manufactured under license from LucasArts Entertainment Company.

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Lexicon Inc.
3 Oak Park
Bedford, MA 01730
Tel 781-280-0390
Fax 781-280-0490
www.lexicon.com



Lexicon Part # 070-11325

## Dansk

### Vigtig information om sikkerhed

Gem denne vejledning til senere brug.

Følg alle anvisninger og advarsler på apparatet.

Apparatet skal altid tilsluttes den korrekte spænding. Der henvises til brugsanvisningen, der indeholder specifikationer for strømforsyning. Der gøres opmærksom på, at ved varierende driftsspændinger kan det blive nødvendigt at bruge andre lednings- og/eller stiktyper.

Apparatet må ikke monteres i et kabinet uden ventilation eller lige over andet udstyr, der udvikler varme, f.eks. forstærkere. Den maksimale omgivelsestemperatur ved drift, der står opført i specifikationerne, skal overholdes.

Der er ventilationsåbninger i kabinettet. For at sikre apparatets drift og hindre overophedning må disse åbninger ikke blokeres eller tildækkes. Stik aldrig noget ind igennem ventilationsåbningerne, og pas på aldrig at spilde nogen form for væske på apparatet.

Dette apparat er forsynet med et stik med jordforbindelse. Denne sikkerhedsforanstaltning må aldrig omgås.

Apparatet må ikke udsættes for regn eller fugt og må ikke bruges i nærheden af vand for at undgå risiko for elektrisk stød og brand.

Apparatet må aldrig bruges, hvis det er blevet stødt, beskadiget eller vådt, eller hvis ændringer i ydelsen tyder på, at det trænger til eftersyn.

Dette apparat må kun åbnes af fagfolk. Hvis dækslet tages af, udsættes man for livsfarlig højspænding.

Denne mærkat på komponenten advarer om uisoleret, farlig spænding i apparatet ... høj nok til at give elektrisk stød.

Denne mærkat på komponenten advarer om vigtig drifts- og vedligeholdsinformation i den tilhørende litteratur.

## Suomi

### Tärkeitä turvallisuusohjeita

Säilytä nämä ohjeet tulevaa käyttöä varten.

Seuraa kaikkia yksikköön merkittyjä ohjeita ja varoituksia.

Käytä aina oikeaa verkkojännitettä. Tehovaatimukset selviävät valmistajan käyttöohjeista. Huomaa, että eri käyttöjännitteet saattavat vaatia toisenlaisen verkkojohdon ja/tai -pistokkeen käytön.

Älä asenna yksikköä telineeseen jossa ei ole tuuletusta, tai välittömästi lämpöä tuottavien laitteiden, esim. tehovahvistimien, yläpuolelle. Ympäristön lämpötila käytössä ei saa ylittää tuotespesifikaation maksimilämpötilaa.

Kotelo on varustettu tuuletusreiillä ja -aukoilla. Luotettavan toiminnan varmistamiseksi ja ylilämpenemisen välttämiseksi näitä aukkoja ei saa sulkea tai peittää. Mitään esineitä ei saa työntää tuuletusaukkoihin. Mitään nesteitä ei saa kaataa yksikköön.

Tuote on varustettu 3-johtimisella maadoitetulla verkkopistokkeella. Tämä on turvallisuustoiminne eikä sitä saa poistaa.

Sähköiskun ja palovaaran välttämiseksi yksikkö ei saa olla sateessa tai kosteassa, eikä sitä saa käyttää märässä ympäristössä.

Älä käytä yksikköä jos se on pudonnut, vaurioitunut, kostunut, tai jos sen suorituskyky on huomattavasti muuttunut, mikä vaatii huoltoa.

Yksikön saa avata vain laitteeseen perehtynyt huoltohenkilö. Kansien poisto altistaa sinut vaarallisille jännitteille.

Tämä kolmio, joka esiintyy komponentissasi, varoittaa sinua eristämättömän vaarallisen jännitteen esiintymisestä yksikön sisällä. Tämä jännite saattaa olla riittävän korkea aiheuttamaan sähköiskuvaaran.

Tämä kolmio, joka esiintyy komponentissasi, kertoo sinulle, että tässä tuotedokumentoinnissa esiintyy tärkeitä käyttö- ja ylläpito-ohjeita.

## Norsk

### Viktig informasjon om sikkerhet

Ta vare på denne veiledningen for senere bruk.

Følg alle anvisningene og advarslene som er angitt på apparatet.

Apparatet skal alltid anvendes med korrekt spenning. Produktbeskrivelsen inneholder spesifikasjoner for strømkrav. Vær oppmerksom på at det ved ulike driftsspenninger kan være nødvendig å bruke en annen ledning- og/ eller støpseltype.

Apparatet skal ikke monteres i skap uten ventilasjon, eller direkte over varmeproduserende utstyr, som for eksempel kraftforsterkere. Den maksimale romtemperaturen som står oppgitt i produktbeskrivelsen, skal overholdes.

Apparatet er utstyrt med ventilasjonsåpninger. For at apparatet skal være pålitelig i bruk og ikke overopphetes, må disse åpningene ikke blokkeres eller tildekkes. Stikk aldri noe inn i ventilasjonsåpningene, og pass på at det aldri søles noen form for væske på apparatet.

Dette apparatet er utstyrt med et jordet støpsel. Dette er en sikkerhetsforanstaltning som ikke må forandres.

Unngå brannfare og elektrisk støt ved å sørge for at apparatet ikke utsettes for regn eller fuktighet og ikke anvendes i nærheten av vann.

Apparatet skal ikke brukes hvis det har blitt utsatt for støt, er skadet eller blitt vått, eller hvis endringer i ytelsen tyder på at det trenger service.

Dette apparatet skal kun åpnes av fagfolk. Hvis dekselet fjernes, utsettes man for livsfarlig høyspenning.

Komponenten er merket med denne trekanten, som er en advarsel om at det finnes uisolert, farlig spenning inne i kabinettet ... høy nok til å utgjøre en fare for elektrisk støt.

Komponenten er merket med denne trekanten, som betyr at den tilhørende litteraturen inneholder viktige opplysninger om drift og vedlikehold.

## Svenska

### Viktiga säkerhetsföreskrifter

Spara dessa föreskrifter för framtida bruk.

Följ alla anvisningar och varningar som anges på enheten.

Använd alltid rätt nätspänning. Se tillverkarens bruksanvisningar för information om effektkrav. Märkväl, att andra matningsspänningar eventuellt kräver att en annan typs nätsladd och/eller kontakt används.

Installera inte enheten i ett oventilerat stativ, eller direkt ovanför utrustningar som avger värme, t ex effektförstärkare. Se till att omgivningens temperatur vid drift inte överskrider det angivna värdet i produktspecifikationen.

Behållaren är försedd med hål och öppningar för ventilering. För att garantera tillförlitlig funktion och förhindra överhettning får dessa öppningar inte blockeras eller täckas. Inga föremål får skuffas in genom ventilationshålen. Inga vätskor får spillas på enheten.

Produkten är försedd med en jordad 3-trådskontakt. Detta är en säkerhetsfunktion som inte får tas ur bruk.

För att undvika elstöt eller brandfara får enheten inte utsättas för regn eller fukt, eller användas på ställen där den blir våt.

Använd inte enheten om den har fallit i golvet, skadats, blivit våt, eller om dess prestanda förändrats märkbart, vilket kräver service.

Enheten får öppnas endast av behörig servicepersonal. Farliga spänningar blir tillgängliga när locken tas bort.

Denna triangel, som visas på din komponent, varnar dig om en oisolerad farlig spänning inne i enheten. Denna spänning är eventuellt så hög att fara för elstöt föreligger.

Denna triangel, som visas på din komponent, anger att viktiga bruksanvisningar och serviceanvisningar ingår i dokumentationen i fråga.

Deutsch

**Wichtige Sicherheitsanweisungen**

Heben Sie sich diese Sicherheitsanweisungen auch für später auf.

Befolgen Sie alle auf der Vorrichtung stehenden Anweisungen und Warnungen.

Immer nur mit der richtigen Spannung verwenden! Die Gebrauchsanweisungen des Herstellers informieren Sie über die elektrischen Anforderungen. Vergessen Sie nicht daß bei verschiedenen Betriebsspannungen ggf. auch verschiedene Leitungskabel und/oder Verbindungsstecker zu verwenden sind.

Stellen Sie die Vorrichtung nicht in ein unbelüftetes Gestell oder unmittelbar über wärmeerzeugende Geräte wie z.B. Tonverstärker. Halten Sie die in den Produktspezifikationen angegebene maximale Umgebungstemperatur bei Betrieb ein.

Schlitze und Öffnungen im Gehäuse dienen der Belüfung; um verläßlichen Betrieb sicherzustellen und Überheizen zu vermeiden dürfen diese Öffnungen nich verstopft oder abgedeckt werden. Stecken Sie nie irgend einen Gegenstand durch die Belüftungsschlitze. Vergießen Sie keine Flüssigkeiten auf den Apparat.

Dieses Produkt is mit einem 3-drahtigen Erdungsstecker ausgerüstet. Diese Sicherheitsmaßnahme darf nicht unwirksam gemacht werden.

Um elektrischen Schlag oder Feuer zu vermeiden, setzen Sie den Apparat weder Regen noch Feuchtigkeit aus und betreiben Sie ihn nicht dort wo Wasser eindringen könnte.

Versuchen Sie nicht den Apparat zu betreiben falls er fallen gelassen, beschädigt, oder Flüssigkeiten ausgesetzt wurde, oder falls sich seine Arbeitsweise derart ändert daß daraus ein Bedarf nach Raparatur zu schließen ist.

Dieser Apparat sollte nur von qualifizierten Fachleuten geöffnet werden. Das Abnehmen von Abdeckungen setzt Sie gefährlichen Spannungen aus.

Dieses Dreieck auf Ihrem Apparat warnt Sie vor nicht-isolierter, gefährlicher Spannung im Gehäuse ... stark genug um eine Berührungsgefahr darzustellen.

Dieses Dreieck auf Ihrem Apparat bedeutet daß wichtige Betriebs- und Wartungsanweisungen in der mitgelieferten Dokumentation zu finden sind.

Español

**Instrucciones importantes de seguridad**

Guarde esta instrucciones para uso posterior.

Utilice siempre el voltaje correcto. Diríjase a las instrucciones de operación del fabricante para obtener las especificaciones de potencia. Esté al tanto de que voltajes de operación distintos requieren el uso de cables y/o enchufes distintos.

No instale esta unidad en un estante sin ventilación, ni tampoco directamente encima de equipos que generen calor tales como amplificadores de potencia. Fíjese en las temperaturas ambientales máximas de operación que se mencionan en las especificaciones del producto.

Las aperturas y ranuras del chasis sirven para proveer la ventilación necesaria para operar la unidad con seguridad y para prevenir sobrecalentamiento, y por lo tanto no pueden ser obstruidas o cubiertas. No introduzca objetos de ningún tipo a través de las ranuras de ventilación, y nunca deje caer ningún líquido sobre la unidad.

Este producto está equipado con un enchufe de 3 clavijas con conexión a tierra. Éste es un elemento de seguridad que no debe ser eliminado.

Para prevenir descargas eléctricas o incendios, mantenga la unidad alejada de la lluvia, humedad o cualquier lugar en el que pueda entrar en contacto con agua.

No trate de hacer funcionar la unidad si se ha caído, está dañada, ha entrado en contacto con líquidos, o si nota cualquier cambio brusco en su funcionamiento que indique la necesidad de hacerle un servicio de mantenimiento.

Esta unidad deberá ser abierta únicamente por personal calificado. Si usted quita las coberturas se expondrá a voltajes peligrosos.

Este triángulo que aparece en su componente le advierte sobre la existencia dentro del chasis de voltajes peligrosos sin aislantes ... voltajes que son lo suficientemente grandes como para causar electrocución.

Este triángulo que aparece en su componente lo alerta sobre las instrucciones de operación y mantenimiento importantes que están en los materiales de lectura que se incluyen.

Français

**Instructions de Sûreté Importantes**

Gardez ces instructions pour réference future.

Observez toutes les instructions et tous les avertissements marqués sur l'appareil.

Branchez uniquements sur un réseau de tension indiquée. Consultez le manuel d'instruction du fabriquant pour les spécifications de courant. N'oubliez pas que différentes tensions peuvent nécessiter l'utilisation de cables et/ou de fiches de connexion différents.

N'installez pas l'appareil en un compartiment non-aéré ou directement au-dessus d'équipements générateurs de chaleur, tels qu'amplificateurs de courants, etc. Ne dépassez pas la température ambiante maximale de fonctionnement indiquée dans les spécifications du produit.

Des fentes et ouvertures sont prévues dans le boîtier pour l'aération; Pour assurer le bon fonctionnement et pour prévenir l'échauffement, ces ouvertures ne doivent pas être couvertes ou bloquées. N'insérez pas d'objets dans les fentes d'aération. Empêchez tout liquide de se répandre sur l'appareil.

Ce produit est muni d'une fiche à trois fils pour la mise à terre. Ceci est une mesure de sécurité et ne doit pas être contrariée.

Pour empêcher les chocs électriques et le danger d'incendie, évitez d'exposer l'appareil à la pluie ou à l'humidité, et ne le mettez pas en marche en un endroit où il serait exposé aux éclaboussures d'eau.

N'essayez pas de faire fonctionner l'appareil s'il est tombé à terre, a été endommangé, exposé à un liquide, ou si vous observez des différences nettes dans son fonctionnement, indiquant la nécessité de réparations.

Cet appareil ne doit être ouvert que par un personnel de service qualifié. En enlevant les couvercles vous vous exposez à des tensions électriques dangereuses.

Ce triangle, sur votre appareil vous avertit de la présence de tension dangereuse, non-isolée à l'intérieur du boîtier...une tension suffisante pour représenter un danger d'électrocution.

Ce triangle sur sur votre appareil vous invite de suivre d'importantes instructions d'utilisation et d'entretien dans la documentation livrée avec le produit.

Italiano

**Importanti norme di sicurezza**

Conservare le presenti norme per l'utilizzo futuro.

Osservare tutte le istruzioni e le avvertenze apposte sull'unità.

Utilizzare esclusivamente con la tensione di rete corretta. Consultare le istruzioni operative fornite dal fabbricante per i dati riguardanti la tensione e l'assorbimento di corrente. Potrebbe essere necessario l'uso di cavi di rete e/o di spine diverse a seconda della tensione utilizzata.

Non installare l'unità in uno scaffale privo di ventilazione oppure direttamente sopra una fonte di calore, come, ad esempio, un amplificatore. Non superare la temperatura ambientale massima di funzionamento riportata nei dati tecnici del prodotto.

Le fessure e le altre aperture nella scatola servono alla ventilazione. Per un funzionamento affidabile, e per evitare un eventuale surriscaldamento, queste aperture non vanno ostruite o coperte in nessun modo. Evitare in tutti i casi di inserire oggetti di qualsiasi genere attraverso le fessure di ventilazione. Non versare mai del liquido di nessun tipo sull'unità.

Questo prodotto viene fornito con una spina a 3 fili con massa. Tale dispositivo di sicurezza non va eliminato.

Per prevenire il pericolo di folgorazione e di incendio non esporre l'unità alla pioggia o ad un'umidità eccessiva; evitare di adoperare l'unità dove potrebbe entrare in contatto con acqua.

Evitare di adoperare l'unità se la stessa è stata urtata violentemente, se ha subito un danno, se è stata esposta ad un liquido o in caso di un evidente cambiamento delle prestazioni che indichi la necessità di un intervento di assistenza tecnica.

Ogni intervento sull'unità va eseguito esclusivamente da personale qualificato. La rimozione della copertura comporta l'esposizione al pericolo di folgorazione.

Il presente triangolo impresso sul componente avverte della presenza di tensioni pericolose non isolate all'interno della copertura... tali tensioni rappresentano un pericolo di folgorazione

Il presente triangolo impresso sul componente avverte l'utente della presenza nella documentazione allegata di importanti istruzioni relative al funzionamento ed alla manutenzione.

# Contents

## Introduction

Congratulations on your purchase of a Lexicon amplifier. Your amplifier has been designed and manufactured for absolute linearity and stability. Utilizing a unique Quad-Complementary output stage, the NT Series amplifers produce less distortion than even Class A designs, with higher efficiency and better long term reliability. A wide variety of input and output connections and configurations are accommodated, as well as unique features specific to complex multi-channel audio systems.

The amplifiers are not “voiced” to “sound” a certain way. We believe an amplifier’s goal is simple; to amplify the signal, accurately and cleanly, into any load, without imparting any coloration or distortion. Indeed, the distortion components of our amplifiers are near the limits of sophisticated test instruments. The amplifier’s sound can best be described as utterly neutral.

While the amplifier’s goal is simple, its job is not. Over 20 years of amplifier research and design have resulted in products that perform flawlessly, year after year after year. Sophisticated engineering, manufacturing, and testing are combined with meticulous craftsmanship and pride. We believe that you will come to pay our amplifer the highest compliment; you will forget about it! The amplifier will quietly, cleanly and reliably perform its job. Enjoy the music, enjoy the movies, forget about the equipment. Thank you for choosing Lexicon.

This manual is designed for installation of any of the five amplifiers models in the Lexicon series: 212, 312, 412, 225 and 501. Whichever model you have selected, we are sure that you will be pleased with its quality and performance.



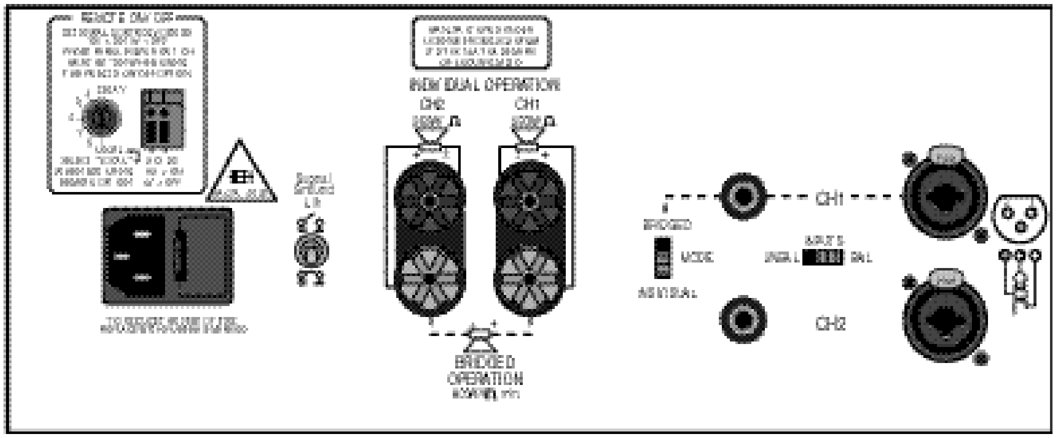
*The 17" model is standard for all models in the NT Series. A 19" rack mount version is available in 120V configurations.*



We have designed this manual to provide a brief overview of each amplifier, as well as to provide the information necessary for safe installation and operation. We trust that the time you invest in reviewing these brief instructions will be rewarded by the best possible performance and longevity of your equipment.

# Overview

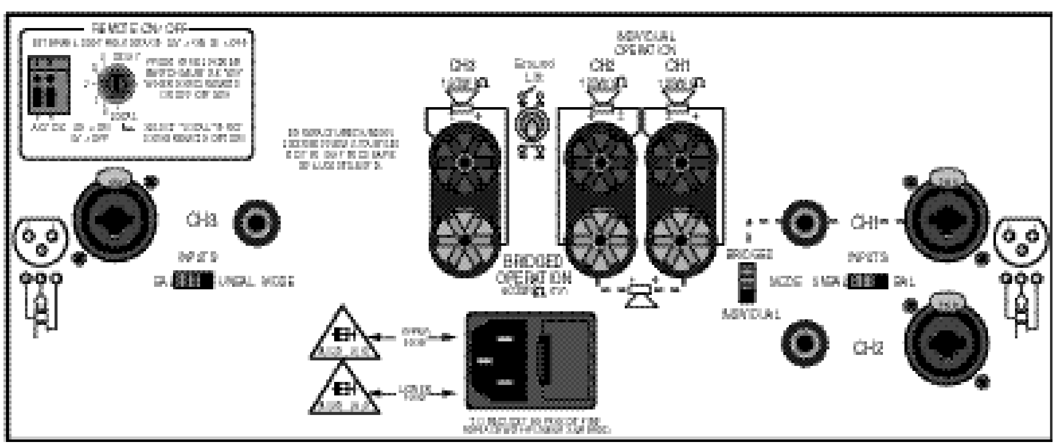
## Models 212 and 225




The 212 stereo amplifier consists of 2 amplifier modules, each with its own power supply. The channels may be operated independently (1=left; 2=right) for stereo at 120 watts/channel @ 8Ω, 200 watts @ 4Ω, or bridged (monaural) to form a single 400 watt amplifier into 8Ω.

The 225 stereo amplifier provides 250 watts/channel @ 8Ω, 400 watts @ 4Ω, or it can be bridged (monaural) to form a single 800 watt amplifier into 8Ω.

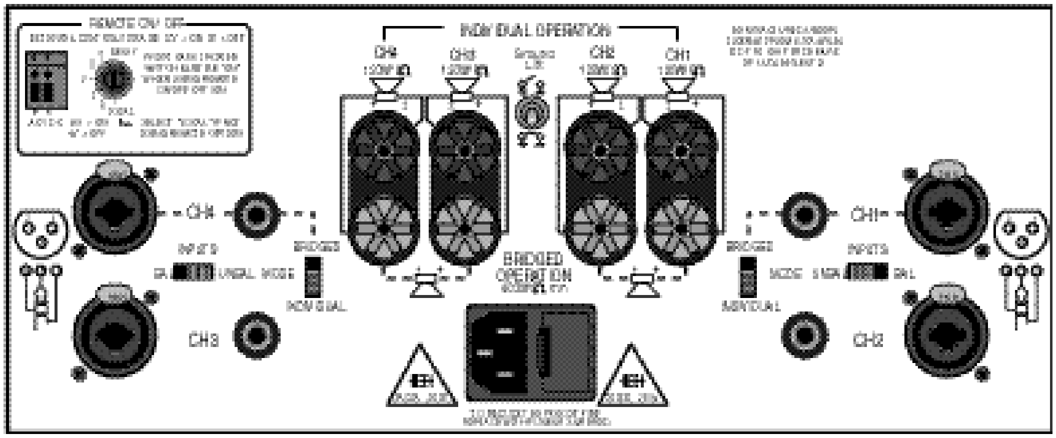
## Model 312




The 312 power amplifier consists of 3 independent amplifier modules, each with its own ±55V power supply, and 4 custom power transistors for a total of 12 output devices.

Channels 1, 2 and 3 may be operated independently at 120 watts/channel @ 8Ω, 200 watts @ 4Ω. Channels 1 and 2 can be bridged (monaural) to form a single 400 watt channel into 8Ω with channel 3 providing an additional 120 watts @8Ω.

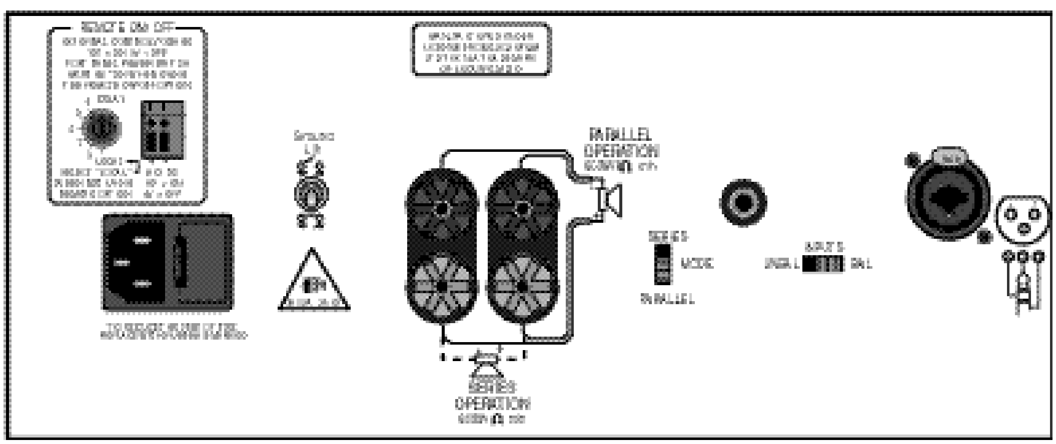
## Model 412




The 412 power amplifier consists of 4 independent amplifier modules, each with its own ±55V power supply, and 4 custom power transistors for a total of 16 output devices. The 412 can be configured to drive 2, 3 or 4 speakers: 4 channels at 120 watts into 8Ω, or 2 channels at 120 watts plus 1 channel at 400 watts, or 2 channels at 400 watts. This provides complete flexibility in any present or future audio or video system.

With 4 discrete channels available, the 412 is an excellent choice to bi-amplify your audio or video system, either actively using an electronic crossover, or passively, using independent connectors for the high and low frequency drivers.

## Model 501




The 501 power amplifier consists of 2 amplifier modules, each with its own ±60V power supply and 8 custom power transistors, for a total of 16, or 32 per stereo pair. The 2 modules can be configured in either Series or Parallel* mode to form a single mono power amplifier capable of up to 800 watts. The Series mode connects the modules in a bridged configuration. The output voltage swing is thus additive, and is appropriate for driving loads from 3-8Ω. Parallel mode yields the voltage swing of a single amplifier module, but the current available is additive, and is appropriate for driving loads from 1-3Ω.

* As the impedance ranges describe *nominal*, not minimum, impedance, it is almost never advisable to use Parallel mode for direct connection to a speaker. Parallel mode is generally only useful when abnormally low impedances (1Ω or less) are created from parallel wiring of multiple speakers.

## Installation

Selecting the appropriate installation location for your amplifier is perhaps the single most important factor in ensuring a long trouble-free service life. Although the amplifier is very conservatively designed, you must provide some airflow around the unit. If you intend to stack multiple amplifiers in an enclosed space, you should consider installing a fan or otherwise assuring adequate airflow around the amps, as they rely on convection cooling.

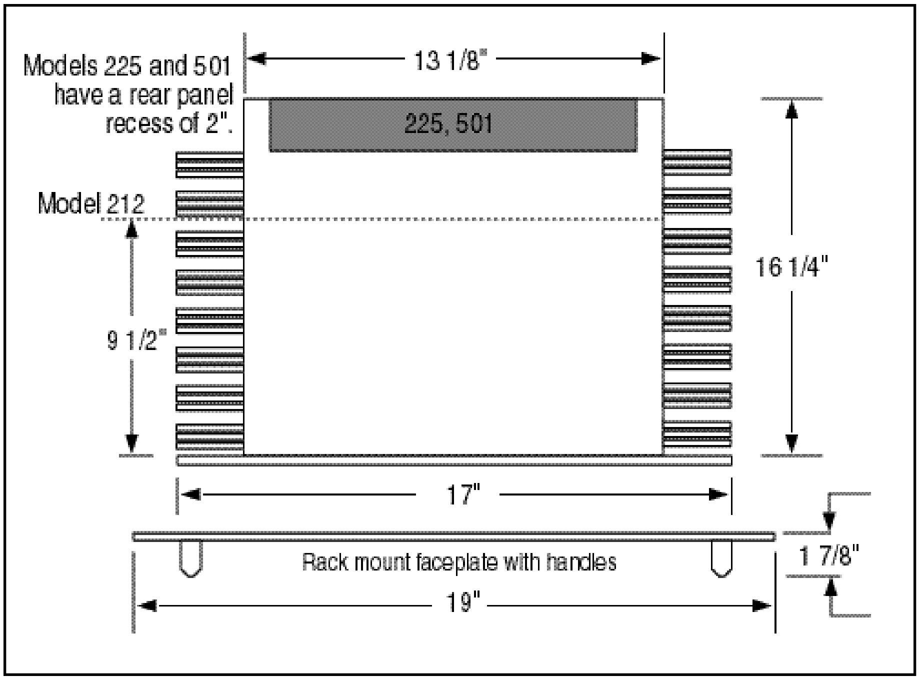
As short runs of power and speaker cabling optimize efficient energy transfer, try to locate the amplifier close to the speakers and power source.

### Mounting

All models in the NT Series share a rugged chassis design that can easily be rack mounted with machine screws (#10 or M5). While the vast majority of weight is in the front of each amplifier, support should be provided for the rear by a shelf or bracket.

The amplifiers are designed to draw air in through the sides, cooling the heat sinks, and ventilating out the top cover. To provide adequate ventilation when racking multiple units, place a 1U spacer between amplifiers. We do not recommend using a perforated panel.

An air inlet should be provided at the bottom of the rack, and a ventilator or exhaust fan should be provided at the top.



## Power Requirements

Lexicon amplifiers do not require any specialized line conditioners, as they have special power supply circuitry designed to reject power line problems like line spikes, surges and RFI. Simply plug each amplifier directly into a line socket. In areas where there is a high likelihood of lightning strikes or other potentially catastrophic surges, additional protection may be warranted. Verify that any surge protection device you choose has ample power conducting capabilities. High power installations may benefit from a review of your electrical service to ensure that adequate power is available and to minimize the chance of ground loops.

Amplifiers rated for 120V may be used *only* on a 60Hz line.

Complete all audio input and output connections and make sure that the front panel power switch is in the OFF (out) position before connecting the AC power cord.

## Audio Connections

Never make or break any connection unless power to the amplifier has been disconnected. Unless you are bridging channels, make sure the mode switch adjacent to the input is set to individual.

Gain level is automatically matched to the type of input used when you select the unbalanced (RCA type connectors) or balanced mode (XLR or 1/4") with the rear panel switch.

Use high quality speaker cables of at least 16 gauge. For runs longer than 3 meters, thicker (lower AWG#) cable should be used. The total loop resistance of the speaker wire should be less than 0.1Ω. Consult your dealer for specific recommendations.

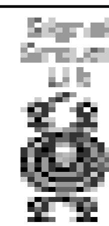
All input and output connectors are gold plated and should be used with high quality cable with gold plated connectors for optimal low-distortion and reliable signal transfer.

## Ground Lift Switch

One of the biggest challenges in large audio and video systems is minimizing the audio hum caused by a “ground loop”. Raising the amplifier rear panel Ground Lift switch to its up position puts a 10Ω resistor in series between the system ground and the chassis ground. The chassis is still grounded.

This may reduce the hum.  Do NOT leave the ground lifted if it does not make a difference.

Often hum is caused in A/V systems through connection to cable TV cables or other equipment which are at a different ground potential. Addressing this at the source is the most efficient path to a clearer, quieter system.



*The Ground Lift Switch does not disconnect the chassis from the third prong on the power cord which must be left intact for safety reasons.*

# Operation

## Front Panel LEDs

All amplifiers in the Lexicon NT Series are equipped with sophisticated comparator circuits which detect sources of signal distortion including clipping, excessive DC or supersonic signals, and short circuits in the cabling. Multi-function LEDs on the front panel are provided to alert you to various operational states of the amplifier.

In normal operation, the front panel LEDs will be lit green, indicating that power is on and the unit is in normal operation.

The LEDs will light yellow when the amplifier is at the threshold of clipping.

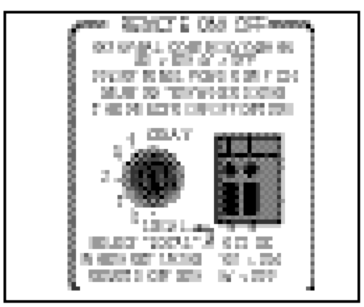
Red indicates actual overload or distortion. Turn the volume down immediately! — The speaker you save may be your own!

**NOTE: The Lexicon NT Series amplifiers are quite powerful and can damage almost any speaker if used carelessly. Lexicon is not responsible for speaker damage nor is it reasonable to expect the speaker manufacturer to honor warranty claims on speakers that have been so abused.**

When the amplifier is turned off, it is normal for the individual LEDs to dim at differing rates, sometimes changing color as well. If one or more LEDs fail to light up, disconnect the power cord and check the fuses next to the power cord.

**CAUTION: Replace fuses only when the power cord is detached from the amplifier and with the type and size of fuses listed on the amplifier rear panel.**

## Remote Trigger



The Lexicon CP-3 *PLUS* and all of the DC-1 series of Digital Controllers provide a low voltage trigger signal when they are in operation. This signal can be used to turn on as many as 4 amplifiers whenever you turn on your processor. (Contact Lexicon if you need to turn on more than 4 amplifiers.)

The timing of the Turn ON function is controlled by a six-position rotary switch on the amplifier. The delay function is provided to allow sequential power-up of multiple amplifiers, minimizing potential power line disruptions by staggering the Turn ON times. At the 0 setting, the amplifier will turn on immediately when it receives the 5V trigger signal. Positions 1-4 will give delays of approximately 1-4 seconds, respectively, before power up.

The input trigger circuit is completely solid-state, and draws 33mA during the maximum delay (4 seconds), and 16mA when ON. It will accept signals from 3.8-20V. To connect a trigger signal, loosen the small screw in the round hole above the rectangular wire terminal opening. Strip off a few millimeters of wire insulation, and insert the bare wire into the rectangular opening. Tighten the screw, and make sure that the wire is held captive.

Wire multiple amplifier triggers in parallel. Common "zip cord" wire is adequate. (If you find that using audiophile cable for the trigger signal sounds better, feel free to use it, just don't tell anyone else.)

The pin outs on the CP-3*PLUS* and DC-1 series have appropriate signals available via the rear panel DIN connectors. Pin 1 is ground and Pin 3 is +5V. (On the DC-1, Pin 3 may be +12V, depending on an internal jumper configuration, but either 5V or 12V will work.)

## Bridged Operation

All of the Lexicon amplifiers, with the exception of the 501, which is single-channel, can be bridged, doubling the normal output voltage. Please refer to the rear panel diagram for each model for specific wiring information. Note that only the red colored output connectors are used in bridged operation. To ensure consistent polarity, note the + and – markings on the bridged operation wiring diagram on the amplifier rear panel.

## Troubleshooting

**No sound**

Check setting of the input connector type (BAL/UNBAL) and operation mode (BRIDGED/INDIVIDUAL).

Check the speaker cable wiring on the rear panel and verify correct configuration for individual or bridged operation.

Use another amplifier channel to verify that the input signal is good. Use another speaker to verify that the speaker is not faulty.

**No LEDs**

Check the power cord connection.

Disconnect power cord from amplifier, and check rear panel fuses.

Check front panel power switch is ON.

Turn Remote ON/OFF switch to LOCAL. If amplifier turns on, check voltage of the trigger signal at the input. It must be at least 3.8 volts.

**LEDs continuously red or yellow**

Check input and output cables for short circuits. If LEDs remain red or yellow, disconnect the power and contact Lexicon Customer Service at (617) 736-0300, or your local dealer.

## Maintenance

Your Lexicon amplifier requires no maintainence. It is, however, good electrical practice to clean all connectors once a year. An occasional dusting of the exterior surface with a soft cloth helps maintain the unit's luster. Do not use any abrasive chemicals or cleaners as this will damage the surface.

# Specifications

| | |
|---|---|
| **Models 212,312,412** | 120 Watts per channel @ 8Ω, 200 watts @ 4Ω<br>Bridging channels yields 400 Watts @ 8Ω |
| **Model 225** | 250 Watts per channel @ 8Ω, 400 Watts @ 4Ω<br>Bridging channels yields 800 Watts @ 8Ω |
| **Model 501** | 500 Watts @ 8Ω, 800 Watts @ 4Ω |
| **S/N** | >110dB |
| **IM + THD** | <0.01% |
| **Input Sensitivity** | 1V for 28.28 VRMS (Approximately 100 watts into 8Ω) |
| **Input Impedance** | 50 kΩ |
| **Slew Rate** | 60 V / µs |
| **Damping Factor** | Individual mode: >500 (20 Hz into 8Ω)<br>Bridged mode>250 (20 Hz into 8Ω)<br>Model 501>300 (20 Hz into 8Ω) |
| **Radiated Interference** | <3 gauss RMS within 2"of case |
| **Polarity** | Non-inverting |
| **Controls and Indicators** | Power on / off<br>3-color LEDs indicates operational status<br>Toggle switches for:<br>bridged / individual operation (212, 225, 312, 412)<br>series / parallel operation (501)<br>balanced / unbalanced operation (all models)<br>6-position rotary switch for remote trigger delay |
| **Connectors** | All connectors are gold plated.<br>Inputs: Balanced 1 / 4" tip-ring-sleeve and XLR<br>Outputs: heavy-duty 5-way binding posts<br>Remote Trigger input accepts bare wire, 18 gauge or smaller<br>3-pin IEC power connector |
| **General** | Dimensions: 212: 17.0"X x 5.25"H x 9"D<br>225, 312 412, 501: 17.0"X x 5.25"H x 15.5"D<br>120V configurations available with 19" x 3U high rack mount faceplate<br><br>Weight: 212: 22lbs net; 26lbs shipping<br>225: 40lbs net; 45lbs shipping<br>312: 33lbs net; 38lbs shipping<br>412: 44lbs net; 49lbs shipping<br>501: 44lbs net; 49lbs shipping<br>Power Requirements: 120VAC, 60Hz or 230VAC, 50Hz. |

*All specifications subject to change without notice.*

Lexicon Inc.
3 Oak Park
Bedford, MA 01730
Tel 781-280-0300
Fax 781-280-0490
www.lexicon.com

Lexicon Part # 070-11325

Printed in Canada